

# Work Order ID 93780

\*93780\*

Page 1

November-27-12 11:18:38 AM

Item ID: D3456-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Washer

SD

Start Date: 11/26/12 Start Qty: 24.00

\*24\*

Cust Item ID:

Required Date: 12/14/12 Req'd Qty: 24.00

\*24\*

Customer:

Reference:

Run Start \*NR1\*

Approvals: Process Plan: MLJ Date: 12-11-28 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3456	Rev A								

100

0.00

\*100\*

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 18531 P/N: 91525A120 per Dwg D3456Possible  
Supplier: McMaster-CarrMaterial release note is required

CL 12/11/28 50

110

Receive & Inspect for Damage & Mat'l Certs

0.00

\*110\*

Packaging

Memo

0.00

Packaging

Ensure Material Release Note is attached

12/11/28 50

120

QC6- Inspect dimensions to drawing

0.00

\*120\*

QC

Memo

0.00

Quality Control

12/11/28  
DAS 15 05 9-83

50

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>						
<b>Root Cause</b>	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
Operator <input type="checkbox"/>												
Material <input type="checkbox"/>												
Setup <input type="checkbox"/>												
Other <input type="checkbox"/>												
Process <input type="checkbox"/>												
Supplier <input type="checkbox"/>												
Training <input type="checkbox"/>												
Unapproved <input type="checkbox"/>												
<b>FAULT CATEGORY</b>												
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	

Work Order ID 93780

\*93780\*

Page 2

November-27-12 11:18:38 AM

Item ID: D3456-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Washer

Start Date: 11/26/12 Start Qty: 24.00

\*24\*

Cust Item ID:

Required Date: 12/14/12 Req'd Qty: 24.00

\*24\*

Customer:

Reference:

Run Start \*NR1\*

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>ST047</u>	0.00							
<b>*130*</b>						<u>50</u>			<u>12/11/30 JB</u>
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
<b>*140*</b>									<u>12/12/30 JB</u>
QC	Memo	0.00							
Quality Control									<u>NLF</u> <u>12-12-03</u>

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

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QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>						
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Other <input type="checkbox"/>												
Process <input type="checkbox"/>												
Supplier <input type="checkbox"/>												
Training <input type="checkbox"/>												
Unapproved <input type="checkbox"/>												
<b>FAULT CATEGORY</b>												
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	

# Picklist Print

November-27-12 11:18:38 AM

Page 1

Work Order ID: 93780

Parent Item: D3456-1

Parent Item Name: Washer

Start Date: 11/26/12

Required Date: 12/14/12

Start Qty: 24.00

Required Qty: 24.00

Comments: IPP A05.10.03New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
91525A120 washer		Purchased	No			100	Each	0.0000	1	24		11/29/12	(50)

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
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Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

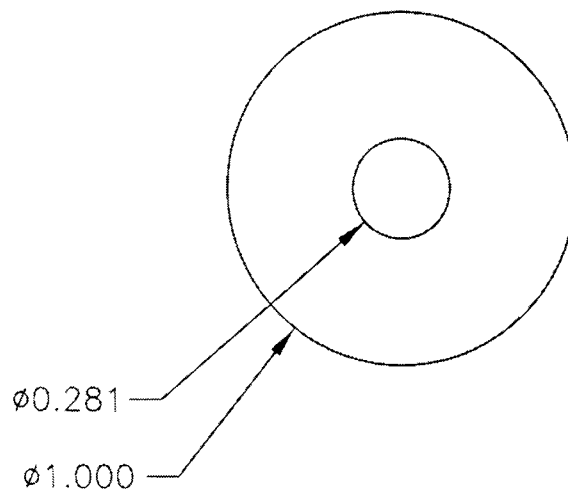
FAULT CATEGORY				
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other	



DESIGN CP	DRAWN BY CP	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED H	APPROVED H	DRAWING NO. D3456	REV. A SHEET 1 OF 1
DATE 05.09.01		TITLE WASHER	SCALE 2:1
A	05.09.01	NEW ISSUE	

05-09-06 H

## SPECIFICATION CONTROL DRAWING



### D3456-1 WASHER

- 1) MATERIAL: 316 STAINLESS STEEL, 0.050" THICK
- 2) MAY PURCHASE McMASTER-CARR P/N 91525A120
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

SHO COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 93780415  
12-11-28

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Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO18531

Purchase Order Date 11/28/12

PO Print Date 11/28/12

Page Number 1 of 1

Order From :

VU-MCM001

MCMaster-CARR SUPPLY CO,  
P.O. BOX 7690  
CHICAGO, IL 60680-7690  
US

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	330 995 5500	Requisition Nbr	
Vendor Fax	330 995 9600	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 10
		Currency	USD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAKED**

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1		4476T62 STEEL	11/29/12 Yes	2.00 Each	FedEx PI collect	\$107.0400	\$214.08

Deliver To: J-LUC

2	91525A120	washer	11/29/12 Yes	50.00 Each	FedEx PI collect	\$0.2664	\$13.32
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Special Inst: AS PER DWG D3456 REV. A  
B93780

3	92311A639	SS SET SCREW	11/29/12 Yes	50.00 Each	FedEx PI collect	\$0.6619	\$33.10
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Special Inst: AS PER DWG D2747 REV. B  
B93797

PO Total: \$260.50

CERTIFICATE OF CONFORMITY  
REQ'D UPON DELIVERY

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required YES NO

Change Nbr: 2

Change Date: 11/28/12





200 Aurora Industrial Pkwy  
Aurora OH 44202-8087  
330-995-5500  
cle.sales@mcmaster.com

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawkesbury ON K6A 1K7  
Canada  
Attention: J-Luc

Purchase Order  
PO18531

Order Placed By  
Chantal Lavoie

McMaster-Carr Number  
4447651-01

Page 1 of 2

11/28/2012

Line	Description	Ordered	Shipped
1	<b>4476T62</b> O1 Tool Steel Tight-Tolerance Sheet, 3/8" Thick, 12" X 12"	2 Each	2
	Unit Price: \$107.04		
	Extended Price: \$214.08		
2	<b>91525A120</b> Type 316 Stainless Steel Large-Diameter Flat Washer, 1/4" Screw Size, 1" OD, .04"-.06" Thick, Packs of 25	2 Packs	2
	Unit Price: \$6.66		
	Extended Price: \$13.32		
3	<b>92311A639</b> 18-8 Stainless Steel Cup Point Set Screw, 3/8"-24 Thread, 1" Long, Packs of 10	5 Packs	5
	Unit Price: \$5.91		
	Extended Price: \$29.55		

1 - 646 - 08 **28 - 81** T62 **2EA** 1  
32 lbs  
2 - 704 2  
2 - 697 3

Charges for this shipment

Merchandise Amount \$256.95  
Total: \$256.95

Dart Aerospace Ltd

EXP  
INV



34 lbs  
3 line:

Sm  
12x12x12

FW1WBP15  
11/28/2012  
14:15/14:42  
105  
Cycle 48

1140573120844

